

WHAT IS CLAIMED IS:

1. An image pickup control device for driving an image sensor comprising:

a photosensitive section in which a plurality of photosensitive devices are arranged for generating signal charges corresponding to incident light;

a plurality of vertical transfer paths for vertically transferring said signal charges;

a horizontal transfer path for horizontally transferring said signal charges transferred from said plurality of vertical transfer paths; and

an outputting circuit for detecting said signal charges transferred from said horizontal transfer path and outputting electric signals corresponding to said signal charges;

said image pickup control device comprising:

a driver for driving said image sensor;

a controller for feeding a first control signal to said driver to thereby control an exposure time over which said image sensor generates the signal charges; and

a switching circuit for switching a power supply voltage for driving said outputting circuit in accordance with a second control signal and then feeding said power supply voltage to said outputting circuit;

said driver comprising a signal generating circuit for generating timing signals for causing said image sensor to transfer the signal charges, which are generated over the exposure time, to said outputting circuit via said plurality of vertical transfer paths and said horizontal transfer path;

said controller feeding said second control signal to said switching circuit for controlling said switching circuit in accordance with the exposure time.

2. The device in accordance with claim 1, wherein said switching circuit switches the power supply voltage from a first

voltage for using the electric signals output from said image sensor as an image signal to a second voltage lower than said first voltage and applies said second voltage to said outputting circuit.

3. The device in accordance with claim 2, wherein said switching circuit switches, immediately before the exposure time expires, the power supply voltage from the second voltage to the first voltage and applies said first voltage to said outputting circuit.

4. The device in accordance with claim 2, wherein said switching circuit switches, when the exposure time expires, the power supply voltage from the second voltage to the first voltage and applies said second voltage to said outputting circuit.

5. The device in accordance with claim 2, wherein said controller comprises a circuit for controlling a bulb exposure for starting and ending the exposure time in accordance with an operator's command, and controls said driver on detecting the end of said exposure time, and

said driver switches the power supply voltage from the second voltage to the first voltage under the control of said controller and applies said first voltage to said outputting circuit.

6. The device in accordance with claim 1, wherein said driver causes said image sensor to discharge unnecessary charges when applied with the second voltage.

7. The device in accordance with claim 1, wherein said controller determines the exposure time in accordance with an exposure value for shooting a desired scene and feeds said second

control signal to said switching circuit at a timing matching with said exposure time to thereby cause said switching circuit to drive said outputting means at a low voltage.

8. The device in accordance with claim 7, wherein said controller feeds said second control signal to said switching circuit when the exposure time is longer than a reference period of time.

9. The device in accordance with claim 7, wherein said reference period of time is substantially 1 second since a start of exposure.

10. The device in accordance with claim 1, wherein said controller comprises a determining circuit for determining an exposure value on the basis of the electric signals output from said image sensor and controls the exposure time in accordance with said exposure value.

11. The device in accordance with claim 1, wherein when a reference period of time expires since a start of exposure, said controller feeds said second control signal to said switching circuit.

12. The device in accordance with claim 1, wherein after feeding said control signal to said switching circuit, said controller restores an original drive voltage, which drives said outputting circuit, when the exposure time expires.

13. The device in accordance with claim 1, further comprising:

a release switch for outputting a release signal representative of an operator's operation; and  
a signal processor for processing the electric signals

output from said image sensor;  
wherein said controller controls said driver in accordance with the release signal.

14. A method of controlling an image sensor comprising a photosensitive section for generating signal charges corresponding to light incident to a photosensitive surface, transfer paths for transferring said signal charges, and an outputting circuit for detecting said signal charges transferred from said transfer paths and outputting electric signals corresponding to said signal charges for thereby generating an image signal representative of a scene being picked up, said method comprising the steps of:

determining whether or not an exposure time of said photosensitive section is a preselected long exposure time;

driving, if the exposure time is the preselected long exposure time, said image sensor with a low voltage lower than a usual drive voltage; and

driving, when the signal charges generated in said photosensitive section are to be read out, said image sensor with said usual voltage instead of said lower voltage.

15. The method in accordance with claim 14, wherein if the exposure time is the preselected long exposure time, said outputting circuit is driven by said low voltage.

16. The method in accordance with claim 14, wherein if the exposure time is the preselected long exposure time, said low voltage is replaced with said usual voltage immediately before said exposure time expires.

17. The method in accordance with claim 14, wherein if the exposure time is the preselected long exposure time, said low voltage is replaced with said usual voltage when said

exposure time expires.

18. The method in accordance with claim 14, wherein the exposure time is determined by automatic exposure control.

19. The method in accordance with claim 14, wherein the exposure time is determined by a manual operation.

20. The method in accordance with claim 19, wherein said low voltage is replaced with said usual voltage after an expiration of the exposure time has been detected.